

Level 1 Validation Certificate



This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 9/10/2018

Water Supplier

Supplier Name:	City of Benicia
Supplier Participants:	Leo Larkin, William Tarbox, Carrie Wenslawski

Key Audit Metrics

Data Validity Score:	65	
ILI:	3.3	
Real Loss:	57.3	gal / conn / day
Apparent Loss:	10.0	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	4.2%	

Validator

Validator:	Kim Manago, Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name: City of Benicia

Water Supplier Public Water System ID: 4810001

Water Audit Period: October 1, 2018 _ water loss audit for the 2017 calendar year

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

The 2016 test results conducted by WSO of the City's treated water production meter, an ABB Aqua Probe, indicated this meter was over-registering by 17% on average. The City replaced this meter October 18, 2017 with a McCrometer FPI meter, then contracted with WSO to perform and validate the performance of the McCrometer meter on November 6, 2017 by conducting a similar volumetric test. These test results indicated the McCrometer was also inaccurate, this time under-registering between 5 – 10%. The City determined the McCrometer needed to be replaced by a meter designed to capture the full range of flows entering the distribution system, a Siemens Mag 5100W. This work has been contracted by the City to occur in FY 2019-20.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print): Leo Larkin

Executive Position: Water Superintendent

Signature:

Date: 09/20/2019

